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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/748,049	12/30/2003	David B. Olson	58907US002	6791
32692	7590	07/19/2006	EXAMINER	
3M INNOVATIVE PROPERTIES COMPANY PO BOX 33427 ST. PAUL, MN 55133-3427			BERNSHTEYN, MICHAEL	
			ART UNIT	PAPER NUMBER

1713

DATE MAILED: 07/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/748,049

Applicant(s)

OLSON ET AL.

Examiner

Michael Bernshteyn

Art Unit

1713

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE \_\_\_\_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 09 May 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) 14-18 and 20-22 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 and 19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_.

### DETAILED ACTION

1. This Office Action follows a response filed on May 9, 2006. Claims 1 and 19 have been amended.
2. In view of the amendment, the rejection of the claims 1-13 and 19 has been withdrawn. Applicant's arguments with respect to claims 1 and 19 have been considered but are moot in view of the new ground(s) of rejection.
3. The claims 1-13 and 19 are active.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1-13 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Olson et al. (U.S. Patent 6,261,700) in view of Williams et al. (U.S. Patent 5,626,800).

Olson discloses coatings, composite structures containing coatings, and compositions for preparing and methods of preparing coatings and composite structures, wherein the compositions comprise inorganic oxide particles and polymerizable brominated compounds, and coatings comprise inorganic oxide particles and a brominated polymer (abstract).

With regard to the limitations of instant claim 1, Olson discloses the compositions, which contain ingredients including inorganic oxide particles and a curable binder precursor, wherein the binder precursor includes a polymerizable brominated compound. Particularly preferred polymerizable brominated compounds comprise polymerizable aromatic, brominated (meth)acrylate compounds having an aromatic portion, a brominated portion (which may or may not be the aromatic portion), and a (meth)acrylate moiety (col. 4, lines 53-63).

Olson discloses that the most preferable first monomer comprising a major portion of 2-propeonic acid, (1-methylethylidene)bis[(2,6,dibromo-4,1-phenylene)oxy(2-hydroxy-3,1-propanediyl)] ester as the reaction product of **tetrabromobisphenol A diglycidyl ether** and **(meth) acrylic acid** which is known under the trade designation '**RDX-51027**' and used in the table 1, examples 1 and 3 (col.26, lines 18-55). This component is readable as component a) in the instant claim 1. Other examples of polymerizable brominated compounds that can be useful in the binder precursor include but are not limited to **tribromophenyl (meth)acrylate**, pentabromophenyl (meth)acrylate, tribromophenylethyl (meth)acrylate, bromomethyl styrene, and brominated bisphenol A (meth)acrylate compounds (col. 8, lines 28-33). Tribromophenyl (meth)acrylate is readable as component b) in the instant claim 1.

A multifunctional non-brominated compound can be any multifunctional non-brominated compound that can react with the other components of the binder precursor to produce a polymer. Preferred multifunctional non-brominated compounds comprise ester (meth)acrylate compounds such as difunctional (meth)acrylate esters of a polyhydric alcohol, and combinations thereof. Of these, trifunctional and tetrafunctional esters of (meth)acrylate esters of polyhydric alcohol can be especially preferred. Examples of suitable multifunctional ester (meth)acrylates include poly(meth)acrylic acid esters of polyhydric alcohols including, for example, **tri(meth)acrylic acid esters of pentaerythritol**, etc. Particularly preferred multifunctional ester (meth)acrylic acids can comprise a mixture of di-, tri-, and tetra(meth)acrylate esters of **pentaerythritol** (col. 12,

line 39 through col. 13, line 13). **Pentaerythritol tri(meth)acrylate** is readable as component c) in the instant claim 1.

Olson discloses that the binder precursor can optionally include one or more polymerizable non-brominated compound (e.g., a monomer, dimer, oligomer, pre-polymer, or polymer), which can react with other components of the binder precursor to provide a brominated polymeric matrix. Such non-brominated compounds can include low molecular weight reactive **diluents** which can modify flow properties of the composition, and **multi-functional crosslinking agents** to crosslink polymers upon reaction and provide a highly crosslinked matrix (col. 10, line 67 through col. 11, line 13). Examples of suitable monofunctional non-brominated polymerizable compounds include 2-hydroxyethyl (meth)acrylate, 2-methylbutyl (meth)acrylate, (meth)acrylic acid, itaconic acid, **2-phenoxyethyl (meth)acrylate**, etc. (col. 11, lines 35-45), thus naming the species of the instant claims, including those elected by Applicant. **2-phenoxy)ethyl (meth)acrylate** is readable as component d) in the instant claim 1.

Olson discloses examples of photoinitiators that generate a free radical source when exposed to ultraviolet light include, but are not limited to, organic peroxides, azo compounds, quinones, etc. (col. 17, lines 23-30). A **photoinitiator** is readable as component e) in the instant claim 1.

Olson does not disclose that a brightness enhancing film comprising an optical layer having a linear array of regular right prisms.

Williams discloses a method of producing a microstructure bearing article that includes the steps of molding the microstructure on the base, curing the resin that forms the microstructure, and heat treating the microstructure (abstract).

With regard to the limitations of instant claim 1, Williams discloses that the brightness enhancement film 11 includes an array of prisms typified by prisms 22, 24, 26, and 28, as illustrated in FIG. 2. Each prism, for example, such as prism 22, has a first facet 30 and a second facet 32. The prisms 22, 24, 26, and 28 are formed on a body portion 34 that has a first surface 36 on which the prisms are formed and a second surface 38 that is substantially flat or planar and opposite the first surface. **A linear array of regular right prisms is preferred for both optical performance and ease of manufacture** (col. 2, lines 43-52).

Both references are analogous art because they are from the same field of endeavor concerning new brightness enhancement film.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate optical layer having a linear array of regular right prisms as taught by Williams in Olson's polymerizable composition for optical articles because a linear array of regular right prisms is preferred for both optical performance and ease of manufacture (US'800, col. 2, lines 50-52), and thus to arrive at the subject matter of instant claim 1 and dependable claims.

With regard to the limitations of instant claims 2-4 and 19, Olson discloses that while amounts outside of the following ranges may be useful, preferred binder precursors can include from **about 20 to about 80 parts by weight (pbw)**

Art Unit: 1713

polymerizable **brominated** compound, e.g., aromatic, brominated (meth)acrylate compound, which is within the claimed range (col. 13, lines 19-22).

With regard to the limitations of instant claims 5-6, Olson discloses that the binder precursor can also contain polymerizable **non-brominated** compound in useful amounts, e.g., from **about 20 to 80 pbw**, preferably about 50 to 70 pbw, based on 100 pbw binder precursor, which is within the claimed range (col. 13, lines 31-33).

It is noted that the amount of the weight ratio of the components A and B is a result effective variable, and therefore, it is within the skill of those skilled in the art to find the optimum value of a result effective variable, as per *In re Boesch and Slaney* 205 USPQ 215 (CCPA 1980). See also *Peterson*, 315 F.3d at 1330, 65 USPQ2d at 1382: "The normal desire of scientists or artisans to improve upon what is already generally known provides the motivation to determine where in a disclosed set of percentage ranges is the optimum combination of percentages."

With regard to the limitations of instant claims 7-9, Olson discloses that particularly preferred multifunctional ester (meth)acrylic acids can comprise a mixture of di-, tri-, and tetra(meth)acrylate esters of **pentaerythritol** (col. 12, line 39 through col. 13, line 13). The amount of **pentaerythritol triacrylate** is within the claimed range (see Component A (col. 24, lines 65-67), Component B (col. 25, lines 18-20) and Component C (col. 25, lines 48-50)). Pentaerythritol triacrylate is a liquid at ambient (room) temperature with low volatility, fast curing monomer for use in free radical polymerization (see [www.sartomereurope.com](http://www.sartomereurope.com)).



Art Unit: 1713

With regard to the limitations of instant claims 10-13, Olson discloses that 2-(phenoxy)ethyl (meth)acrylate as monofunctional (meth) acrylate diluent is a liquid at ambient (room) temperature with low volatility and  $T_g = 54^{\circ}\text{C}$  (col. 11, line 42).

### ***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claim 1 is provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 9 and 10 of copending Application No. 10/727,830. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of Application 10/727,830 recite a brightness enhancing film comprising the reaction product of the same components as set forth in the instant claims. The present component (a) corresponds to applicant's (b),

component (b) corresponds to applicant's (a) and components (c) and (e) correspond accordingly to applicant's components (c) and (d). The scope of the present claims is fully encompassed by the scope of the claims in copending application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Bernshteyn whose telephone number is 571-272-2411. The examiner can normally be reached on M-F 8-5:30.

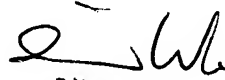
Art Unit: 1713

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on 571-272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Michael Bernshteyn  
Patent Examiner  
Art Unit 1713

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